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ABSTRACT

Five experiments were carried out to gain insight into foreign language learning as it takes place in the classroom environment, and to create optimal learning conditions for beginning Swedish-speaking learners of English as a Foreign Language. The experiments examined receptive and productive comprehension of English vocabulary in Swedish-speaking students between the ages of 10 and 12. The students either had no formal English language instruction or had had less than one year of English instruction in school. The first experiment tested the uninstructed students' ability to identify aurally common English words and expressions, and the second experiment investigated the English-instructed students' ability to understand passages from fairy tales. The third experiment tested the uninstructed students' ability to make lexical inferences from a text in which Swedish-English cognates were maximized and "false friends" excluded. Experiment four required the English-instructed students to write as many words as possible beginning with a particular letter, with the language unspecified. The fifth experiment studied the effect on vocabulary learning of playing a computer game with English vocabulary, in which new vocabulary was defined on-screen. Analysis of the five studies' results suggests that Swedish-speaking students have an English vocabulary of varying size when they begin English language study in school, and that the quality of the vocabulary depends on the type of input available to each learner, with input on topics of interest learned more readily. Implications for instructional materials are considered. (MSE)

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FIVE EXPERIMENTS ON EFL VOCABULARY LEARNING: A PROJECT REPORT

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Introduction and aim

As suggested in Faerch et al. (1984:100), vocabulary knowledge in a foreign language should be viewed as "a continuum between ability to make sense of a word and ability to activate the word automatically for productive purposes". Using this definition as a starting-point, the present paper summarizes the main findings of five experiments on EFL (English as a Foreign Language) vocabulary learning. The experiments were carried out at the Department of Teacher Education at Åbo Akademi as part of a current research project on EFL learning and teaching. The main aims of the project are to make insights into foreign language learning as it takes place in the classroom environment, and to create optimal learning conditions for beginning Swedish-speaking learners of EFL. In conclusion, the paper makes suggestions for the improvement of foreign-language vocabulary learning and teaching in general, especially in terms of vocabulary selection and the choice of working materials and teaching aids.

The language situation in Finland

Finland has two official languages, Finnish and Swedish, which are spoken as mother tongues by 94 and 6 per cent of the population respectively. The two languages are unrelated to one another, insofar as Finnish is a Finno-Ugric and Swedish an Indo-European language. Apart from the language programmes, there are basically no differences in the educational systems of the two language groups. In schools where Finnish is the language of instruction, the pupils may choose whether they want to take Swedish or English as their first non-native language. However, in schools where Swedish is the language of instruction, Finnish, with few exceptions, is the first and English the second non-native language taught. As a result, the vast majority of Swedish-speaking children get their first formal lessons in English when they enter the fifth form at school at the age of 11.

Subjects

Project research has concentrated on two main groups of Swedish-speaking pupils: (a) fourth-formers (aged 10-11) with no experience whatsoever of formal English instruction, and (b)

fifth-formers (aged 11-12) with less than one year of English studies at school (i.e. less than 38 school weeks comprising two 45 minute lessons per week). Considering, however, the facts that in Finland foreign films are presented with original sound (plus subtexts in either Finnish or Swedish), and that more than 60 per cent of the foreign films and programs shown on Finnish television are either British or American, it is obvious, generally speaking, that Finnish pupils cannot be classified as absolute beginners in terms of previous exposure to English when they start learning it at school. Furthermore, owing to the organization of the language programmes in the Finnish educational system, and to the amount of Finnish that the Swedish-speaking minority is exposed to in its everyday life, Swedish-speaking children who live in urbanized areas are, in effect, nearly or perfectly bilingual in Finnish.

Experiment One

Experiment One (see Palmberg 1985a for a summary of a pilot study described in Lillqvist 1983) investigated the extent to which 74 fourth-formers could correctly identify a selection of 40 everyday English words and 14 expressions recorded on tape, and also what words the pupils tended to produce when asked to write down any English words that they knew.

In general, the pupils' receptive knowledge of English vocabulary was found to be fairly good. The average solution percentage for correctly identified individual words was 52, and for expressions, 58. It was also found that the solution percentages were especially high for words which are similar or almost similar in pronunciation to their Swedish translational equivalents. In the free-production test the pupils produced an inventory of 866 correct English word tokens, or 246 different words. Most of these words referred to aspects of everyday life, including the numerals 1-15, the days of the week, and a selection of different colours and animals. Other words that were produced tended to reflect the individual interests of the pupils.

Experiment Two

Experiment Two (see Palmberg 1985b for a detailed analysis of the findings, or Palmberg 1987a for a summary) investigated the extent to which six fifth-formers (selected according to their performance in a vocabulary test) could understand two passages from the fairytale of Goldilocks and the Three Bears. The first passage introduced the bears and their different-sized porridge bowls; the second one described how the bears returned to their house and discovered that someone had been eating their porridge. The pupils were presented with the passages and asked, in pairs,

to read them for meaning, i.e. to try to make as much sense as possible of them. (For a description of such 'think-aloud' activities, see e.g. Hosenfeld et al. 1981.) Having finished their meaning analysis, each pair was given a list of words from the text for translation into Swedish. The conversations were recorded on tape.

Although the pairs differed in their use of reading and inferencing strategies, it was evident that the most important sources of information were 1) their general knowledge of fairytale elements, and more importantly, 2) their assumption that translational equivalence existed between formally similar English and Swedish words.

Experiment Three

To further investigate young learners' ability to make lexical inferences, Experiment Three (Palmberg 1988b) was carried out in the form of a think-aloud activity requiring a second and a fourth-former to read through an English text for meaning. The text used was a slightly modified version of the first paragraphs of 'Going to London' (created by Back and Masar 1986). Aimed to conform to the age and interests of 11-year-olds, 'Going to London' tells the story of a girl who, while travelling to London by bus, falls asleep and has a dream. When selecting vocabulary for the story Back and Masar made conscious attempts to; 1) include a high percentage of words which are orthographically identical or nearly identical to their Swedish equivalents and share at least one of the meanings of the words; 2) to exclude 'false friends' altogether; and 3) to include words that (according to the findings in Experiment One) tended to be familiar to fourth-formers in general.

On the whole, the pupils were fairly successful in their attempts to decode the meaning of the text. As expected, the most important clues were provided by words which they interpreted as orthographically similar to existing Swedish words and by words that they had learned by listening to rock music and from watching television commercials. Yet, while making their first hypotheses about meaning mainly based on assumed formal similarities between content words, they were also, to various degrees, conscious about sentence structures (typically demonstrated in their attempts to establish word-for-word relationships between the original text and their translated version).

Experiment Four

Concentrating solely on the productive end of the suggested vocabulary-knowledge continuum, Experiment Four (Palmberg 1987b) was carried out in the form of 17 spew tests requiring 22 fifth-

formers for one minute each week to write down as many words as they could think of that began with a given letter. The impression was given that both the letter and the language in which the pupils were asked to produce words, differed randomly from week to week, but in fact English was the target language every second week, with the two letters M and R alternating.

The results pointed first of all to a relatively big difference in size between the native Swedish-language lexicon and the not yet fully developed English-language lexicon of the pupils. They also indicated a steady increase in the overall word-production capability of the pupils over time. Qualitatively, it seemed as if the words that the pupils first thought of were mostly vocabulary items from the English textbook used in class. The similarities in the patterns of vocabulary production of the pupils taken as a group appeared to be largely affected by the degree to which the words produced were repeated in the textbook; the degree to which the words had been practiced in class by the teacher, and, finally; the possible rehearsal effect of the test itself. Any variability in the vocabulary-production patterns, whether on an individual or group level, could largely be explained by the individual and general interests of the pupils, especially rock music and computer games.

Experiment Five

To study the effects of young learners' interaction with computers on their learning of EFL vocabulary, Experiment Five (Palmborg 1988a) was carried out in three phases. In Phase One, a third and a fifth-former were introduced to Pirate Cove, a text-adventure computer program comprising a total of 118 different words, most of which were content words having to do with pirates and treasure hunting. The session lasted for 45 minutes, and the pupils were provided with translations of all unknown words appearing on the screen.

Another 45-minute session, Phase Two, was conducted one month later. The pupils were invited to replay the game, and they were offered help with the language whenever needed. For Phase Three, which took place one month after Phase Two, the pupils were given a list of 50 words selected from the program vocabulary and were asked to provide the words with Swedish translations.

Judging from their performance in the first two phases, the pupils had learned in only two sessions to recognize and correctly interpret the majority of the vocabulary items used in the program. During Phase Three, they immediately identified where the test words were derived from. Furthermore, they were able to assign correct translational equivalents to 35 of the words, despite the fact that recognizing and understanding isolated words is much more difficult than inferring the meaning of words contained in reading passages. As expected, they were especially successful with words that shared formal similarities

with their Swedish equivalents.

Discussion

It is well known that a prerequisite for learning a foreign language is that the learner is exposed to the language. Such language exposure, or input, may be either comprehensible or incomprehensible to the learner (see Krashen 1981, 1982). Comprehensible input may be of two types: 1) input which the learner can interpret directly by means of his existing knowledge of the foreign language; 2) input which he can interpret by means of inferencing procedures. Faerch et al. (1984:188) refer to the latter type of input as "intake", i.e. the portion of the foreign language which becomes assimilated by the learner and fed into his interlanguage system (cf. Ellis 1986:127ff.)

Seen from the point of view of the beginning Swedish-speaking learner of English, there are obvious differences between the types of English-language input offered by the foreign-language classroom and the natural environment of the learner. Vocabulary selection used in the classroom is fairly uniform since textbook writers must follow official guidelines published by the Finnish National Board of General Education. (For a list of the minimal basic vocabulary to be actively known by pupils leaving comprehensive school at the age of 16, see Engelska 1978). As for the English-language input provided by the environment, it is clear that a lot of variety exists due to a number of different factors. Yet it seems safe to assume that television programs and popular music constitute the two major sources of English-language input generally available to Finnish primary-school pupils. The degree to which this input is comprehensible to individual pupils, and also becomes intake, is largely determined by the pupils themselves, or, more specifically, by their individual interests. (When asked in a questionnaire to state where they believed they had picked up their existing English vocabulary, 56 out of 74 fourth-formers chose the option "by watching television"; Palmberg 1985a.)

Relying on prior knowledge to facilitate new learning is a very general psychological process. One type of such prior knowledge is the mother tongue, whose role in foreign-language learning has for a long time been a much debated issue among researchers (see Kellerman & Sharwood Smith 1986 for a recent recent collection of papers). As pointed out in Faerch et al. (1984:193-194), "language distance" is not so much a matter of objective, as of perceived distance between two languages. Thus it is not enough that learners have developed an intuitive or experience-based feeling for how closely related two languages are in order to transfer mother-tongue forms into the foreign language, or, as Experiments Two and Three show, assign meaning to English words based on formal similarities with Swedish words. They must also, irrespective of their judgements, possess a

willingness to transfer. For beginner-level learners, however, the mother tongue is in many cases the only relevant resource of knowledge. They will therefore use it both consciously and unconsciously to perform as well as they can in the foreign language (cf. Ellis 1986:19ff.).

Other relevant factors are the learners' age (which may bring about differences in the cognitive domains of learners), and their knowledge of the world. It is not, for example, possible for young learners to relate foreign-language words to ones which have not yet been conceptualized in terms of their mother tongue (Ringbom 1985a, 1986 & 1987). It could also be that the memory span of young learners with virtually no knowledge of the foreign language is effectively shortened due to lack of training and familiarity with the foreign material, thus making it much more difficult for them to remember what they have previously read or heard (cf. Yorio 1971). This was probably the case in Experiment Three, where the pupils often failed to make use of information obtained from bottom-up processing (which involves gradual decoding of larger language segments; i.e. phonological and morphological to syntactic and semantic decoding; see Faerch 1984:64 ff.) for purposes of top-down processing (utilization of linguistic or other knowledge), or vice versa. In Experiment Five, on the other hand, control of the vocabulary contained in the computer game constituted little difficulty to the learners, probably owing to the fact that motivational factors were well secured by the learners' interest in the program itself.

Conclusions

To sum up, it is obvious that Swedish-speaking learners already have English vocabularies of various sizes when they start learning the language at school, and that the quality of such vocabularies depends on the type of input that has been available to each learner. It is equally obvious that the learners can, with the help of inferencing procedures, interpret fairly accurately even large portions of selected text passages in English.

A large quantity of input may not in itself determine the rate of learning. When it comes to the actual converting of comprehensible input into intake, the quality of the input is an equally important variable. Applying the principle of language needs to vocabulary selection means that the vocabulary items selected must satisfy the important needs of everyday communication, or more specifically, the learners' personal, social, cognitive, labelling, and classroom and teaching needs (Nation 1983:16). Yet in the classroom situation where the target language is a foreign (as opposed to second) language, the individual interests and the natural environment of the learners, rather than communicative needs proper, often determine what words they actually learn.

Thus, when selecting EFL working materials for beginning Swedish-speaking learners, the teacher could facilitate vocabulary learning, and, of course, language learning in general, by exposing his pupils to a wide range of material that emphasizes and fully exploits formal similarities between Swedish and English words, and preferably, at the same time revises vocabulary that has already been introduced in the textbook. To ensure maximum comprehension, the topics of such material should be relevant to the learners insofar as it should relate as much as possible to their age and individual interests. The language itself should be neither too easy nor too difficult; in fact it should go just a little beyond the present linguistic capability of the learners (cf. Krashen's 'i+1' hypothesis; 1981). As for teaching aids, teachers who wish to revise or introduce specific areas of vocabulary could make occasional use of carefully selected computer games. These constitute good examples of teaching materials that satisfy the criterion of language needs relevant to young learners while at the same time increasing their motivation. In doing so, it could be possible to speed up vocabulary learning considerably, and make foreign-language learning much more rewarding and enjoyable for the learners.

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